

WHAT IS CLAIMED IS:

1. In a LAN having terminals connected to each other via cables extending from a line concentrator, each of said cables including therein a signal line for delivering data signals for mutual communication between the terminals and said terminals including at least one telephone terminal, a power feeding system comprising:

a power feed line included in each of said cables;

a power feed section for feeding power to said at least one telephone terminal via the corresponding power feed line;

power feed control switching sections each for establishing or disabling communication between said power feed section and the corresponding power feed line;

a current monitor section for detecting whether a value of current flowing in each of said power feed lines when each of said power feed lines is connected to said power feed section is within a preset current value range which represents a state where the telephone terminal is connected to the cable including therein the corresponding power feed line; and

a control section for controlling said power feed control switching sections to connect the corresponding power feed lines to said power feed section in sequence, and for controlling each of said power feed control switching sections to stop feeding the power via the corresponding power feed line when said current monitor section detects that the value of the current flowing in the corresponding power feed line is outside said preset current value range, and to continue feeding the power via the corresponding power feed line when said current monitor section detects that the value of the current flowing in the corresponding power feed line is within said preset

current value range.

2. The power feeding system according to claim 1, further comprising a link detecting section for monitoring each of said signal lines in sequence to detect whether link of the terminal connected to the corresponding signal line is established, wherein said control section controls the corresponding power feed control switching section to continue feeding the power to the corresponding power feed line when said link detecting section detects that the link of the terminal connected to the corresponding signal line is established, while the value of the current flowing in the corresponding power feed line is detected to be within said preset current value range.

3. The power feeding system according to claim 1, further comprising a link detecting section for monitoring each of said signal lines in sequence to detect whether link of the terminal connected to the corresponding signal line is established, wherein said control section controls the corresponding power feed control switching section to continue to stop feeding the power to the corresponding power feed line when said link detecting section detects that the link of the terminal connected to the corresponding signal line is established, while the corresponding power feed line is disconnected from said power feed section by the corresponding power feed control switching section.

4. The power feeding system according to claim 1, further comprising a line state monitor table for storing given states of the power feed line and the signal line of each of said cables, wherein said control section controls, by switching among said cables per given period, an operation of the whole power feeding system including the operations of said power feed control switching

sections based on said line state monitor table.

5. The power feeding system according to claim 2, further comprising a line state monitor table for storing given states of the power feed line and the signal line of each of said cables, wherein said control section controls, by switching among said cables per given period, an operation of the whole power feeding system including the operations of said power feed control switching sections based on said line state monitor table.

6. The power feeding system according to claim 3, further comprising a line state monitor table for storing given states of the power feed line and the signal line of each of said cables, wherein said control section controls, by switching among said cables per given period, an operation of the whole power feeding system including the operations of said power feed control switching sections based on said line state monitor table.